

Technology: Optoelectronics

 A firm of several Lambda Physik NovaLine F2020 lasers has been awarded to 'a high-profile independent research and development chip consortium in Europe.' The laser will be used to illuminate a full-field 157nm step-and-scan tool. The company maintains that the NovaLine F2020 is the only lithography laser available in the industry. The source delivers 200 mW of selected laser power at a pulse rate. The 157nm, 26x34mm area tool is claimed as the first to create working chips.

AXT-Optoelectronics, a division of the AXT Incorporated, has been certified to the ISO9001:2000 standard in recognition of its successful implementation of the quality management system criterion. The division manufactures VCSELs, edge-emitters and nitride-based LEDs.

Japan's Supreme Court has ruled in favour of the right of employed inventors to be properly rewarded regardless of a company's provisions to limit reward amounts for inventions produced as part of their jobs. A number of former employees are suing their employers over ownership of their inventions and seeking compensation for what their employers earn from their inventions, including an ongoing high-profile suit filed by Nakamura, who developed the blue LED as a key semiconductor device while an employee of Nichia Corp.

Essient Photonics of Bellshill Scotland, a startup making 10 and 40 Gb/sec ultra-low-power optical modulators, has gone out of business. The company is now trying to sell assets, including two key patents on which its product is based. In March last year Essient was awarded \$7m funding, but in the event only received \$4m.

Ciena makes BT but loses AT&T

Ciena has at last been included on British Telecom's approved list of suppliers, along with several other 'framework' agreements. These include LM Ericsson, Lucent Technologies Inc, Nortel Networks Corp and Marconi. Ciena also announced that it had a contract with British Telecoms to help build a 'next generation network.' Ciena will be "a strategic supplier of optical transport and switching equipment and network management software," and sees the approval as adding BT to its big client sector of

AT&T and Teléfonos de México.

Ciena claims its LightWorks architecture has been selected for live deployment in the next-generation networking rollouts at BT. Products on the approved list include Ciena's CoreDirector, CoreStream, Online Metro, Online Edge, MetroDirector K2, and On Center Management System.

BT business can make for good cash flow. Marconi, for the past couple of quarters has earned around 20% of its revenues from BT sales, particular-

ly in the SDH area, where Ciena is not a main contender. Ciena is expecting to see new revenue from the listing in its 4Q starting August. But cautious industry observers note that the company is still several years away from profitability with a current £700m breakeven figure. And apprehension seems justified with Ciena, Corvis and Lucent Technologies loosing out on AT&T business to Siemens which wins the latest contract for equipment to expand fibre optic network capacity.

And for forward lighting

Automotive designers at Audi, Ford and leading styling studios are adding headlamps to the growing list of automotive lighting components powered by LEDs, reflecting technology advances that have made light-emitting diodes bright enough to be incorporated in head-lights for the first time.

The new headlamps are being built with Luxeon LEDs from Lumileds Lighting, each emitter delivers up to 60 times more light than conventional 5mm LEDs. Luxeon technology makes new headlight design

capitalise on the small size of LEDs; consume less energy than standard lamps; with no environmentally undesirable mercury; and not needing replacement for the life of the vehicle.

In recent auto shows, the Ford Model U, Audi Nuvolari concept vehicles, the Fioravanti concept car, and two custom-body productions from one-off designer Carrozzeria Castagna have featured headlamps using Luxeon LEDs.

Designs have ranged from the

sharply angled front lighting on the Ford and the slim horizontal headlamps on the Audi Nuvolari to the 'insect eyes' on the Fioravanti Yak, as well as giving a radical look to the Viper-powered Dodge Tomahawk four-wheel concept motorcycle, a 500hp machine. The Tomahawk's headlamps, between the two front wheels in a striking double strip of lights are formed by a series of single white Luxeon emitters, each fitted with a custom lens. Rear lighting consists of an identical double strip of red LEDs.

LED saves 85% on neon

A national retailer asked GELcore to create a border tube solution to coincide with its Tetra Channel Lighting System. GELcore produced its new Border Tube System - a robust, high brightness LED solution providing energy savings up to 85% percent over standard neon. "The product is a complete solution for a number of outdoor sign applications," said Paul Southard,

GELcore's Programme Manager who noted that the system gives the appearance of neon without added expense and maintenance issues.

In addition to aesthetic benefits, the tube system also offers advantages in the maintenance department. With pre-manufactured corners (interior and exterior), allowing for quick and simple installation. All cut

pieces can be used, eliminating scrap material. Up to 64feet can be supported by a single outdoor-rated power supply - allowing for nearly maintenance-free operation. It is both UL and Class II Rated, and is comprised of UV and impact-resistant material. When launched, a variety of colours will be offered, including red, green, blue and amber.